

REMARKS

Responsive to the Office Action mailed February 25, 2004, reconsideration of the present application is respectfully requested. Claims 1-10 and 14-45 are currently pending. Claims 1-6, 8-10, and 18-45 have been rejected. Claims 7 and 14-17 have been allowed. Claims 5, 11-13, and 45 have been cancelled without prejudice or disclaimer. Further, the subject matter of the various claims was commonly owned at the time the inventions covered therein were made.

Claims 22, and 42 have been objected to for informal reasons. The informalities have been changed in the claims and thus the objection should be removed.

Claims 27 and 28 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,679,473 to Blatchford et al. ("Blatchford"). Independent claim 27 has been amended to include the limitations of allowable claim 14. Thus claim 27 is believed to be in condition for allowance and such favorable action is respectfully requested. Because claims 28-37 depend from claim 27, claims 28-47 are believed to be in condition for allowance for at least the above cited reasons. As such, Applicants respectfully request withdrawal of the §102(b) rejection of claims 27-37. Thus, claims 27-37 are believed to be in condition for allowance and such favorable action is respectfully requested.

Claims 1-5, 18, 19, and 40 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,213,768 to Jensen ("Jensen") in view of CA836117 and further in view of U.S. Patent No. 5,447,564 to Xie et al ("Xie"). Independent claims 1, 18, and 40 have been amended to include the limitations of allowable claim 14. Thus claims 1, 18, and 40 are believed to be in condition for allowance and such favorable action is respectfully requested. Because claims 2-4 and 6-7 depend from claim 1, claims 19-26 depend from claim 18, and claim 41 depends from claim 40, claims 2-4, 6-7, 19-26, and 41 are believed to be in

condition for allowance for at least the above cited reasons. As such, Applicants respectfully request withdrawal of the §103(a) rejection of claims 2-4, 6-7 and 19-26. Thus, claims 1-4, 6-7, 18-26, and 40-41 are believed to be in condition for allowance and such favorable action is respectfully requested.

Claims 6, 20, 22, and 25 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Jensen in view of CA836117, Xie and further in view of U.S. Patent No. 3,573,427 to Minsk ("Minsk"). As stated above, claim 6 depends from allowable claim 1 and thus is believed to be in condition for allowance for at least the above cited reasons. As such, Applicants respectfully request withdrawal of the §103(a) rejection of claim 6. Further, as stated above claims 20, 22, and 25 depend from allowable claim 18 and, thus, are believed to be in condition for allowance for at least the above cited reasons. As such, Applicants respectfully request withdrawal of the §103(a) rejection of claims 6, 20, 22, and 25.

Claim 21 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Jensen in view of CA836117, Xie and further in view of U.S. Patent No. 5,942,140 to Miller ("Miller"). As stated above claim 21 depends from allowable claim 18 and, thus, is believed to be in condition for allowance for at least the above cited reasons. As such, Applicants respectfully request withdrawal of the §103(a) rejection of claim 21.

Claim 24 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Jensen in view of CA836117, Xie and further in view Miller. As stated above claim 24 depends from allowable claim 18 and, thus, is believed to be in condition for allowance for at least the above cited reasons. As such, Applicants respectfully request withdrawal of the §103(a) rejection of claim 24.

Claims 8 and 23 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Jensen in view of CA836117, Xie and further in view of the Mikio Article.

Independent claim 8 has been amended to include the limitations of allowable claim 14. Thus, claim 8 is believed to be in condition for allowance and such favorable action is respectfully requested. Because claims 9-10 depend from claim 8, claims 9-10 are believed to be in condition for allowance for at least the above cited reasons. As such, Applicants respectfully request withdrawal of the §103(a) rejection of claims 9-10. Thus, claims 8-10 are believed to be in condition for allowance and such favorable action is respectfully requested. As stated above claim 23 depends from allowable claim 18 and, thus, is believed to be in condition for allowance for at least the above cited reasons. As such, Applicants respectfully request withdrawal of the §103(a) rejection of claim 23.

Claim 26 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Jensen in view of CA836117, Xie, Minsk, and further in view of the Mikio Article. As stated above, claim 26 depends from allowable claim 18 and, thus, is believed to be in condition for allowance for at least the above cited reasons. As such, Applicants respectfully request withdrawal of the §103(a) rejection of claim 26.

Claims 9 and 10 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Jensen in view of CA836117, Xie, Minsk, the Mikio Article and further in view of U.S. Patent No 4,871,959 to Gali ("Gali"). As stated above, claims 9 and 10 depend from allowable claim 8 and, thus, are believed to be in condition for allowance for at least the above cited reasons. As such, Applicants respectfully request withdrawal of the §103(a) rejection of claims 9 and 10. Thus claims 9 and 10 are believed to be in condition for allowance and such favorable action is respectfully requested.

Claims 27-31, 33, 36, and 41 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Jensen in view of CA836117, Xie, and further in view of Blatchford. Independent claim 27 has been amended to include the limitations of allowable claim 14. Thus

claim 27 is believed to be in condition for allowance and such favorable action is respectfully requested. As stated above, because claims 28-31, 33, and 36 depend from claim 27, and claim 41 depends from allowable claim 40, claims 28-31, 33, 36 and 41 are believed to be in condition for allowance for at least the above cited reasons. As such, Applicants respectfully request withdrawal of the §103(a) rejection of claims 28-31, 33, 36 and 41. Thus claims 27-31, 33, 36 and 41 are believed to be in condition for allowance and such favorable action is respectfully requested.

Claims 32 and 35 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Jensen in view of CA836117, Xie, Blatchford and further in view of Miller. As stated above, claims 32 and 35 depend from allowable claim 27 and, thus, are believed to be in condition for allowance for at least the above cited reasons. As such, Applicants respectfully request withdrawal of the §103(a) rejection of claims 32 and 35. Thus, claims 32 and 35 are believed to be in condition for allowance and such favorable action is respectfully requested.

Claims 34 and 37 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Jensen in view of CA836117, Xie, Blatchford and further in view of the Mikio Article. As stated above, claims 34 and 37 depend from allowable claim 27 and, thus, are believed to be in condition for allowance for at least the above cited reasons. As such, Applicants respectfully request withdrawal of the §103(a) rejection of claims 34 and 37. Thus claims 34 and 37 are believed to be in condition for allowance and such favorable action is respectfully requested.

Claims 38 and 42 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Jensen in view of CA836117, Xie, and further in view of Nath. Claims 38 and 42 have been amended to recite “the bridge sides and said second layer constituting a lossy resonator to thereby focus heat on said accumulation.” The Nath patent neither teaches nor

suggests using conductive concrete as a lossy resonator that would focus generated heat on any ice or snow accumulation on its surface. Nath teaches the use of radio frequency radiation to raise the temperature of an electronic bug to disable it. (See Col. 4, lines 1-4.)

Further, the rejection of Applicant's claims 38 and 42 based on the combination of Jensen in view of CA836117, Xie, and further in view of Nath is improper and should be withdrawn because there is no suggestion or motivation to combine the references and because the resulting combination does not teach Applicant's device as amended.

MPEP §2142 states that, "[t]he examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness." §2142 goes on to state that:

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some *suggestion or motivation*, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or *to combine reference teachings*. Second, there must be a reasonable expectation of success. *Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.*

In setting forth a prima facie case of obviousness, "the examiner must provide a factual basis to support the obviousness conclusion." Ex Parte GPAC Inc., 29 USPQ2d 1401 (Bd. Pat. App. & Inter. 1993); See also In re Warner, 154 USPQ 173 (CCPA 1967); In re Lunsford, 148 USPQ 721 (CCPA 1966); and In re Freed, 165 USPQ 570 (CCPA 1970). "The Examiner can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." In re Fritch, 23 USPQ2d 1780 (Fed. Cir. 1992).

Applying the above-quoted case law to the present situation, the Examiner is required to point to a suggestion or motivation in the art to in order for the combination of Jensen in view of CA836117, Xie, and further in view of Nath to be proper. Applicant submits that no such suggestion or motivation exists in these references that would teach claims 38 and 42 as amended. As stated above, Nath teaches the use of radio frequency radiation to raise the temperature of an electronic bug to disable it. The Examiner states that Nath when combined with Jensen in view of CA836117 and Xie teaches the claimed invention. However, claims 38 and 42 as amended require using conductive concrete as a lossy resonator that would focus generated heat on any ice or snow accumulation on its surface. As a result, none of the references teach or suggest the claims as amended. Thus, the rejection of Applicant's claims 38 and 42 based on the combination Jensen in view of CA836117, Xie and in further view of Nath, is improper and should be withdrawn

In an attempt to satisfy the requirement for a motivation to combine, the Examiner states in the Office Action that "[I]t would have been obvious to one of ordinary skill in the art to use an RF source to heat the concrete of the previously described apparatus so that the concrete was effectively heated either by continuous waves or short energy bursts." It is not, however, simply sufficient for an examiner to state that a given combination would have been obvious to one of ordinary skill in the art. The Examiner has the burden to establish that any combination of prior art references is obvious to one of ordinary skill in the art and must provide the factual basis for such reasoning. In order to satisfy this burden, the Examiner must point to an objective teaching in the prior art that would lead someone to combine the relevant teachings of these references. See In re Fritch, 23 USPQ2d 1780 (Fed. Cir. 1992).

While it is true that the evidence of a suggestion, teaching or motivation to combine prior art may flow from the prior art references themselves or the knowledge of one of

ordinary skill in the art, that does not diminish the requirement that the Examiner must actually point to such a suggestion or motivation. See In re Anita Dembiczak, et al., 50 USPQ2d 1614 (Fed. Cir. 1999). Applicant submits that the Examiner has not done such. Instead, the Examiner has merely stated that it would have been obvious because the resulting device would have been better.

Further, it is not enough that one skilled in the art could adapt the teachings of the prior art to come up with Applicant's invention. There must be a teaching or suggestion in the art that would motivate such a person to make the proposed combination. That is why the Federal Circuit recently stated that "[t]he proper test is whether there was a suggestion or motivation in one of the pieces of prior art that would have motivated one of ordinary skill in the art to combine the references. Absent such suggestion, the combination would not be obvious." Monarch Knitting Machinery Corp. v. Sulzer Morat GmbH, 45 USPQ2d 1977 (Fed. Cir. 1998). The Examiner has pointed to no "suggestion or motivation in one of the pieces of prior art that would have motivated one of ordinary skill in the art to combine the references" in the manner claimed by Applicant. Accordingly, the rejection is improper and should be withdrawn. Such action is respectfully requested.

Still further, in order for a reference to be properly combinable, only references which are within the field of the inventor's endeavor or which are reasonably pertinent to the particular problem confronting the inventor are considered in determining obviousness. In re Wood, 202 USPQ 171 (CCPA 1979). Two criteria have evolved for determining whether prior art is analogous: (1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved. In re Deminski, 230 USPQ 313 (Fed. Cir. 1986).

The determination that a reference is from a nonanalogous art is therefore twofold. First, we decide if the reference is within the field of the inventor's endeavor. The electronic surveillance destroying device of Nath is clearly not in the field of a system for melting ice or snow by applying a radio frequency across conductive concrete to create microwave heating and therefore is clearly not in Applicant's field of endeavor.

Next, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved. In the present instance, Applicant was faced with the problem of melting ice or snow via microwave heating on a bridge deck by applying radio frequency across conductive concrete. Nath, however, does not deal with or solve this problem. Instead, Nath deals with the use of radio frequency radiation to raise the temperature of an electronic bug to disable it. One in the conductive concrete arts would not look to the electronic bug disabling field for suggestions for a means to use microwave heating to heat ice and snow accumulation on conductive concrete.

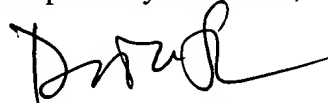
In summary, Applicant submits that the rejection of claims 38 and 42 is improper as Nath is non-analogous art and nothing in Nath teaches or suggests the amended claims of the Applicant's invention.

Claims 39, 43, and 44 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Jensen in view of CA836117, Xie, Nath, and further in view of Blatchford. Claims 39, 43 and 44, which depend from claims 38 and 42, are submitted to be allowable, at a minimum, by virtue of their dependence from an allowable base claim. Accordingly, Applicant respectfully requests the rejections be withdrawn and claims 38, 39 and 42-44 be indicated as allowable. Such favorable action is respectfully requested.

CONCLUSION

The claims now pending in the application, namely claims 1-4, 6-10, and 14-44 are in condition for allowance and such allowance is respectfully requested. If any issues remain that would prevent issuance of this application, the Examiner is urged to contact the undersigned by telephone prior to issuing a subsequent action. The Commissioner is hereby authorized to charge any additional amount required, or credit any overpayment, to Deposit Account No. 19-2112.

Respectfully submitted,



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